

no disease or process of disease treated purely and simply by their use. The number of valuable diuretics in the *Pharmacopœia*, or outside of it, is extremely limited. If you attend to the indications for their employment, you will have no difficulty in selecting from the limited number the suitable diuretics for use in any particular case. You will not infrequently find your art baffled, which may make you try something new, only to find that it is not a true diuretic; but whatever drugs you employ, administer them with a strong infusion of common sense from which all credulity has been eliminated.—*British Medical Journal*, 1897, No. 1928, p. 1697.

MEDICINE.

UNDER THE CHARGE OF

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Bacteriology and Pathology of Sero-fibrinous Pleurisy.—LE DAMANY (*La Presse Médicale*, November 24, 1897, p. 329) concludes from his researches on the bacteriology and pathology of sero-fibrinous pleuritis:

1. That sero-fibrinous pleuritis, where the effusion contains micro-organisms other than the bacilli of Koch, are not due to the action of these micro-organisms on the pleura.

2. That the pleurisy may be primary; in this case it is always tuberculous. The presence of ordinary micro-organisms in the effusion is accidental, and their discovery cannot be used as an indication of the nature of the pleural inflammation.

3. The pleurisy may be secondary and non-tuberculous. Then the pleural inflammation arises by the extension of a pulmonary lesion or by a sort of collateral fluxion. The cause of the effusion is in the lung (infarct, congestion, hepatization). Whether the pulmonary lesion is aseptic or infectious, the presence of the microbes in the pleuritic fluid is still accidental and exceptional.

4. There is but one idiopathic sero-fibrinous pleurisy—it is the tuberculous pleurisy. The other sero-fibrinous effusions are symptomatic of a concomitant pulmonary lesion, which they never outlast.

He studied eighty-two cases of pleurisy, which he divided into two groups:

1. Fifty-five primary pleuritis, in all but four of which the pathogenic action of Koch's bacillus was demonstrated. Eleven occurred in patients with outspoken tuberculosis, of which two died of an acute miliary spread; one post-traumatic case; one in a case of nephritis; one in an individual with aneurism of the aorta; one in the course of progressive pernicious anemia; one in a case of heart disease. All these pleuritis were tuberculous.

2. Non-tuberculous pleuritis, of which there were eleven. Four of these

were in association with pneumonia; three in rheumatism with cardiac complications; three in cases of cancer.

In carrying out his investigations no new methods were used, but great care was used in the clinical examinations, cultures, inoculations, and pathological study.

The inoculation experiments were made on guinea-pigs. As large quantities of the fluid as possible were injected into the peritoneal cavity of the animal. He has injected into the peritoneum of a single guinea-pig as much as 300 c.c. of pleuritic fluid in weekly doses of 10 to 50 c.c., according to its toxicity.

He thus inoculated fifty-five pleuritic fluids, and produced tuberculosis in the animal in forty-seven instances. In eight instances negative results were obtained, the greater part of which were to be attributed to inoculation with insufficient doses. Among these eight negative results four were from cases with sero-fibrinous pleurisy without other micro-organisms or culture, pleurisies coming on in individuals having outspoken tuberculosis of the apices. It seemed fair to assume that these cases were tuberculous. One of the four pleurisies remaining had obstinate symptoms, large relapsing effusion without ordinary micro-organisms, and the clinicians believed the case to be one of tuberculous pleurisy. Only 10 c.c. of fluid were inoculated from another case, so that the negative result is without much value. In a third case he inoculated but 20 c.c., and in a fourth 50 c.c. of fresh pleuritic fluid.

These results show that it is generally possible to demonstrate the presence of tubercle bacilli in the fluid of primary sero-fibrinous pleurisies by this method of inoculation. In fact, tubercle bacilli were demonstrated in practically seven out of every eight cases of primary pleurisy. If to the forty-seven positive cases the four negative, which were undoubtedly tuberculous, are added, Le Damany's results showed 92 per cent. of the fifty-five cases of primary pleurisy to be tuberculous.

Culture methods, he believes, lead many observers astray. He holds that it is a mistake to conclude from the development alone of a parasite in cultures from a pleuritic fluid that this micro-organism is the pathogenic agent of the pleurisy. He obtained in eighty cultures from pleuritic fluid but eight positive results in aerobic cultures. Anaërobic cultures had always given negative results. Sixty-eight of these pleurisies were primary or came on in the course of pulmonary tuberculosis (eleven cases). From these cases there were obtained seven positive results.

When compared with the inoculation experiments, these culture results are interesting. Among the organisms found in the cultures were the pneumococcus, staphylococcus albus, micrococcus tetragonus, and bacterium coli communis. The inoculation of the pleuritic fluid from these same cases produced tuberculosis in the inoculated animal. The writer thus believes that these organisms play an unimportant rôle in such cases, and he thinks they are conveyed to the pleura by phagocytes.

The pathological study of sero-fibrinous primary or secondary pleurisies enables one to divide them into two large groups:

1. The primary or tuberculous pleurisies.
2. The secondary or non-tuberculous pleurisies.

The evolution of primary tuberculous pleurisy goes through three stages:

a first, corresponding to the formation of a new-formed tuberculous membrane on the surface of the pleura; a second, characterized by the development of the effusion and the arrest of the pleural tuberculosis, is favorable, the effusion in moderate amounts being a conservative factor; a third, marked by the absorption of the serous fluid and the organization of the fibrinous false membrane which covers the new-formed membrane, cannot be absorbed, and is very thick toward the inferior part of the pleura.

The pathogenesis of secondary, non-tuberculous, sero-fibrinous pleuritis is not more complex than in the primary tuberculous form. Omitting those due to cancer, these are practically always due to a pulmonary lesion. These result from pulmonary infarcts or from subpleural pulmonary hepatization. These pleuritis are not due to the pneumococcus, since it is rarely found in cultures or by inoculation of mice. Pneumococcus pleuritis are nearly always purulent.

In *résumé*, there is but one sero-fibrinous primary pleuritis, according to Le Damany, namely, tuberculous pleuritis. It alone is due to the penetration of a micro-organism into the pleura. It is the only form in which the effusion contains more or less constantly the pathogenic agent—the bacillus of Koch. It is, then, the only one in which the fluid, normally, is not sterile. The ordinary micro-organisms which are found exceptionally in these primary pleuritis play no rôle so long as they do not become purulent; their presence is purely accidental.

Glycosuria in Primary Cancer of the Pancreas.—BARD and PIC (*Revue de Médecine*, December 10, 1897, No. 12, p. 929) discuss this interesting question again, after having published a memoir on it in the same journal in 1888. In their earlier communication they asserted that the symptoms of pancreatic cancer were quite characteristic and could be classified into two groups. In one group the symptoms were positive: occurrence of emaciation and rapid cachexia, icteric bronzing, distention of the gall-bladder, sometimes pain, and a tumor in the epigastrium; in the other, negative: absence of swelling of the liver and spleen, absence of ascites. To these symptoms Hanot had applied the term the "Bard-Pic syndrome." Other symptoms, such as steatorrhœa, lipuria, and glycosuria, considered of first importance by some observers, Bard and Pic held were not cardinal symptoms of the disease. The importance of distention of the gall-bladder in cancer of the pancreas, in contrast to its contracted state, usually observed in icterus due to gall-stone obstruction, had been emphasized by other observers.

Some clinicians, among them Litten and Lachmann, consider that glycosuria is of the greatest value in the diagnosis of pancreatic cancer. Bard and Pic failed to find sugar in the urine in any of the seven cases which they reported in their first paper, and Parisot and Caron regard glycosuria as a rare symptom.

Mirallié, recognizing this difference of opinion, collected in 1892 all the cases of primary cancer of the pancreas he could find in the literature, and analyzed them with especial reference to the frequency of the occurrence of glycosuria. He collected 113 cases in all; in fifty of the cases it was definitely stated that sugar was searched for in the urine, and in thirteen of these it was found present. An alimentary glycosuria was present in two of the